

IN THE CLAIMS:

Please cancel Claims 4 and 9 without prejudice to or disclaimer of the subject matter recited therein. Please amend Claims 1 and 6 as shown below.

1. (Currently Amended) A radiation converting substrate constituted by forming comprising:

a substrate capable of transmitting radiation;

a phosphor layer arranged on said substrate, for converting [[a]] said radiation into light; and

a moisture-preventing protective layer covering said phosphor layer, in succession on a substrate capable of transmitting the radiation;

wherein said phosphor layer comprises an alkali halide and a light emission activator, and

wherein said moisture-preventing protective layer comprises a first plasma polymerization film covering said phosphor layer and formed from a monomer of a silane compound, and a second plasma polymerization film covering said first plasma polymerization film and formed from a monomer of a fluorine-containing unsaturated hydrocarbon.

2. (Original) A radiation converting substrate according to claim 1, wherein said first plasma polymerization film and said second plasma polymerization film are laminated in succession on said phosphor layer.

3. (Original) A radiation converting substrate according to claim 2, wherein said fluorine-containing unsaturated hydrocarbon monomer includes 2 to 5 carbon atoms.

4. (Cancelled)

5. (Original) A radiation image pickup apparatus formed by adheing a radiation converting substrate according to claim 1 and a sensor substrate including a photoelectric converting element.

6. (Currently Amended) A radiation image pickup apparatus constituted by forming comprising:

a sensor substrate provided with a photoelectric converting element;

a phosphor layer arranged on said sensor substrate, for converting [[a]] radiation into light; and

a moisture-preventing protective layer covering said phosphor layer, in succession, either directly or across a protective layer, on a sensor substrate provided with a photoelectric converting element;

wherein said phosphor layer comprises an alkali halide and a light emission activator, and

wherein said moisture-preventing protective layer comprises a first plasma polymerization film covering said phosphor layer and formed from a monomer of a silane

compound, and a second plasma polymerization film covering said first plasma polymerization film and formed from a monomer of a fluorine-containing unsaturated hydrocarbon.

7. (Original) A radiation image pickup apparatus according to claim 6, wherein said first plasma polymerization film and said second plasma polymerization film are laminated in succession on said phosphor layer.

8. (Original) A radiation converting substrate according to claim 7, wherein said fluorine-containing unsaturated hydrocarbon monomer includes 2 to 5 carbon atoms.

9. (Cancelled)

10. (Original) A radiation image pickup system comprising:
a radiation image pickup apparatus according to claim 6;
signal processing means which processes a signal from said radiation image pickup apparatus;
recording means which records a signal from said signal processing means;
display means which displays a signal from said signal processing means;
transmission means which transmits a signal from said signal processing means; and
a radiation source for generating said radiation.